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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,444	09/12/2003	Gerrit de Wit	GEPL.P-128	7822

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EXAMINER	
WARTALOWICZ, PAUL A	
ART UNIT	**PAPER NUMBER**
1754	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,444	DE WIT, GERRIT	
	Examiner	Art Unit	
	Paul A. Wartalowicz	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/8/06 has been entered.

Response to Arguments

Applicant's arguments filed 12/8/06 have been fully considered but they are not persuasive.

Applicant argues that, as detailed in paragraph 3 in Applicant's 132 declaration, it would be apparent to a person skilled in the art that from the methods described in paragraphs 029-033 of the present application that "the containers of the present invention are not biaxially oriented".

However, it is unclear how paragraphs 029-033 would result in non-biaxially oriented containers. It appears that this disclosure is not specific enough to warrant a conclusion that the materials produced are not biaxially oriented. Absent this evidence, the Examiner maintains that the specification does not render support to "containers...are not biaxially oriented".

Applicant argues that Adams is non-analogous art and that just because the Adams' patent is drawn to a bottle or container does not automatically correlate to a finding that Adams is analogous art to the present invention.

However, Adams is drawn to a bottle or container exhibiting gas barrier properties. Both the current invention and the Adams patent are drawn to containers designed with enhanced gas barrier properties. One of ordinary skill in the art would recognize that Adams' polymeric container exhibits properties that enable use for liquids having dissolved carbon dioxide content because gas barrier properties are instrumental in such determinations. That the applicant's invention and the Adams patent have different classifications is not persuasive because it appears that the classification of Adams referred to by applicant describes only one particular embodiment and that even if Adams was limited to this embodiment arguendo, that Adams has additional layers does not exclude Adams from teaching the current invention.

Applicant also argues that Examiner's reasoning and comparison is equivalent to comparing containers for the storage of perfume to containers for the storage of rocket fuel. However, this appears incorrect because the containers of Adams are concerned with similar properties as those of the instant application: housing a pressurized substance, gas barrier properties, and creep properties. There does not appear to be such commonalities between containers for perfume containers and rocket fuel containers.

Applicant argues that the Examiner fails to address the limitation of a non-biaxially oriented polymer with reinforcing agents disposed within the polymer as claimed and instead dissects Adams disclosure and creates a mosaic that resembles the present invention.

However, Adams teaches a resinous matrix with structural fibers that are consolidated in the matrix (Throughout document, particularly col. 5, lines 45-50) with the resinous material extruded (Throughout document, particularly col. 6, lines 15-25). The prior art shows a similar method of making the product such that properties of that product are substantially similar, including the orientation of said resinous matrix.

Applicant argues that Mori does not mention nor provide disclosure of any vales or examples that demonstrate how to reduce transfer of carbon dioxide gas from a liquid phase to the gas phase to the gas phase through the non-oriented reinforced polyester container wall and that Mori only cites US 3733309 which discloses that a bottle may be made from biaxially oriented polyethylene terephthalate and that the bottles of the '309 patent have considerably worse creep properties than those of the present invention.

However, Mori is relied upon only to show that polyester is known in the art of containers holding pressurized mixtures for the purpose of reducing permeability of carbon dioxide. Mori is not relied upon to teach orientation of the material. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Additionally, even if a comparison in the creep properties of the '309 patent and the current invention are warranted, the '309 patent describes the creep as *less than* 5% after 90 days. The creep may be close to 5% or 0%. It is unclear from the disclosure of the '309 patent what the actual creep is; therefore a comparison is not possible.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

These claims include the recitation "polyester that is not biaxially oriented". However, these limitations do not appear to have support in the specification. The recitation in the specification (paragraphs 029-033) that applicant has pointed to for support for this claimed limitation is not in of itself seen as rendering support to said claimed limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 1-4, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams ('812) in view of Mori et al ('804).

As to claims 1 and 10, Adams teaches a pressurized container made of polyesters reinforced with structural fibers (col. 1, lines 10-11; the container's wall is composite with structural fibers embedded within a resinous matrix, col. 3, lines 49-50; Figure 3, col. 5, lines 46-50). Adams also teaches virtually no leakage and no solubility of the gas in the polymer (col. 3, lines 34-36). Adams teaches that the containers can store pressurized gas that is defined as any mixture or material that, when enclosed in a container has an absolute pressure exceeding 40 psi at 21.1 degree Celsius or has an absolute pressure exceeding 140 psi at 54.4 degree Celsius (col. 3, lines 5-8). Compressed gases include but are not excluded to oxygen (col. 3, line 13). Adams fails

to teach a pressurized container wherein upon being filled with a liquid having a dissolved carbon dioxide content of about 0.4-0.6 wt % at an internal pressure of at least 1 bar, said pressurized container maintains a dissolved carbon dioxide content of at least 0.25 wt % after 0.5 year at a storage temperature of about 30 to 35 degree Celsius.

Mori et al., however, teaches a polyester bottle comprising polyethylene terephthalate which is well known for much reduced permeability of gases such as oxygen and carbon dioxide (col. 1, lines 17-21). The primary reference, Adams, also teaches that containers such as vessels and bottles for pressurized gases are well known in the art to be made entirely of polymeric materials (col. 1, lines 7-11).

Mori et al. further teaches that polyethylene terephthalate is a widely used material for reducing permeability of carbon dioxide and oxygen in pressurized containers (carbonated drink bottles, col. 1, lines 22-23).

Therefore, one of ordinary skill in the art would have recognized that polyethylene terephthalate is used in the primary reference to reduce permeability of carbon dioxide in pressurized containers since both the primary and secondary reference, Mori et al., teach containers with pressurized gases for reducing permeability of pressurized gases.

Thus, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided a polyester bottle comprising polyethylene terephthalate in Adams in order to reduce permeability of oxygen gas of the pressurized container as taught by Mori et al.

As to claim 2, Adams teaches reinforcing agents selected from glass or carbon fibers (col. 5, lines 21-22). All of the limitations of claim 3 are drawn to a process and are given no patentable weight because the subject matter being evaluated is the product. As to claim 4, Adams teaches a plurality of reinforcing strips attached to and reinforcing said container with each strip encircling the container in a hoop direction at least once (filament winding of continuous fibers, col. 5, lines 30-32). As to claim 8, Adams teaches a pressurized container having a wall thickness of at least 0.2 mm (5-50 mils, col. 4, lines 64-65). As to claim 9, Adams teaches a pressurized container having a total liquid volume of at least 15 liters (5.5-31000 liters, col. 4, lines 45-48).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams ('812) in view of Mori et al ('804) in further view of Duse ('763).

Adams and Mori et al. teach a pressurized container as described above.

As to claim 5, Adams and Mori et al. fail to teach a pressurized container wherein the reinforcing agents are glass fibers having a length of at least 0.5 cm.

Duse, however, teaches a reinforced polyester bottle with glass fibers having a length of at least 0.5 cm (0.5-2.0 cm, col. 3, lines 30-34) for the purpose of resisting fracturing during stretch-blow molding.

Therefore, it would have been obvious to one of ordinary skill at the time applicant's invention was made to have provided glass fibers having a length of at least 0.5 cm in Adams and Mori et al. in order to resist fracturing during the stretch-blow molding process as taught by Duse.

Claims 6, 7, and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (U.S. 5150812) in view of Mori et al (U.S. 4421804) in further view of Duse (U.S. 4892763) and Zimmerman et al. (U.S. 3814725).

Adams teaches a pressurized container having a wall thickness of at least 0.2 mm (5-50 mils, col. 4, lines 64-65) wherein the wall portion comprises a polyester (col. 3, lines 49-51) and has a reinforcing agent (col. 5, lines 44-51; figure 3) wherein the reinforcing agent is carbon or glass fibers (col. 5, lines 20-25). Adams fails to teach that the wall portion comprises 30 to 50 wt % of the reinforcing agent.

Zimmerman et al., however, teaches polyester such as polyethylene terephthalate and polybutylene terephthalate (col. 1, lines 38-41) with glass fibers (col. 2, lines 46-50) in the amount of from 20-50 wt % (col. 2, lines 63-66, col. 4, lines 5-20) for the purpose of imparting outstanding physical properties (col. 1, lines 42-49) for molding resins (col. 1, lines 50-55).

Duse teaches that it is common for beverage containers to comprise polyethylene terephthalate (col. 1, lines 42-45).

Therefore, it would have been obvious to one of ordinary skill in the art to provide polyester with glass fibers in the amount of from 20 to 50 wt % (col. 2, lines 63-66, col. 4, lines 5-20) in Adams in order to impart outstanding physical properties (col. 1, lines 42-49) in a material known for molded resins (col. 1, lines 50-55) as taught by Zimmerman.

As to claims 10 and 19 referring to permeability property, Adams teaches a pressurized container made of reinforced polyesters (col. 1, lines 10-11; col. 3, lines 49-

50; Figure 3, col. 5, lines 46-50). Adams also teaches virtually no leakage and no solubility of the gas in the polymer (col. 3, lines 34-36). Adams teaches that the containers can store pressurized gas that is defined as any mixture or material that, when enclosed in a container has an absolute pressure exceeding 40 psi at 21.1 degree Celsius or has an absolute pressure exceeding 140 psi at 54.4 degree Celsius (col. 3, lines 5-8). Compressed gases include but are not excluded to oxygen (col. 3, line 13). Adams fails to teach a pressurized container wherein upon being filled with a liquid having a dissolved carbon dioxide content of about 0.4-0.6 wt % at an internal pressure of at least 1 bar, said pressurized container maintains a dissolved carbon dioxide content of at least 0.25 wt % after 0.5 year at a storage temperature of about 30 to 35 degree Celsius.

Mori et al., however, teaches a polyester bottle comprising polyethylene terephthalate which is well known for much reduced permeability of gases such as oxygen and carbon dioxide (col. 1, lines 17-21). The primary reference, Adams, also teaches that containers such as vessels and bottles for pressurized gases are well known in the art to be made entirely of polymeric materials (col. 1, lines 7-11).

Mori et al. further teaches that polyethylene terephthalate is a widely used material for reducing permeability of carbon dioxide and oxygen in pressurized containers (carbonated drink bottles, col. 1, lines 22-23).

Zimmerman, teach polyester such as polyethylene terephthalate and polybutylene terephthalate (col. 1, lines 38-41) with glass fibers (col. 2, lines 46-50) in the amount of from 20-50 wt % (col. 2, lines 63-66, col. 4, lines 5-20) for the purpose of

imparting outstanding physical properties (col. 1, lines 42-49) for molding resins (col. 1, lines 50-55) which inherently reduces permeability.

Therefore, one of ordinary skill in the art would have recognized that polyethylene terephthalate is used in the primary reference to reduce permeability of carbon dioxide in pressurized containers since both the primary and secondary reference, Mori et al., teach containers with pressurized gases for reducing permeability of pressurized gases and Zimmerman teaches a polyester with glass fibers of from 20 to 50 wt % (col. 2, lines 63-66, col. 4, lines 5-20) which commonly comprises beverage containers.

Thus, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided a polyester bottle comprising polyethylene terephthalate in Adams in order to reduce permeability of oxygen gas of the pressurized container as taught by Mori et al.

The combined teachings of Adams, Mori et al., Duse, and Zimmerman teach a substantially similar product as that of the invention such that the properties of the combined prior art, such as the claimed permeability of claim 20, would be substantially similar to that of the claimed invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Wartalowicz whose telephone number is (571) 272-5957. The examiner can normally be reached on 8:30-6 M-Th and 8:30-5 on Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul Wartalowicz
February 24, 2007

Steven Bos
Primary Examiner
A.U. 1754